RCA Cunningham Radiotron RADIO TUBES

RCA-6C5

Detector Amplifier Triode

The 6C5 is a three-electrode tube of the metal type recommended for use as a detector, amplifier, or oscillator. This tube has a high mutual conductance together with a comparatively high amplification factor.

TENTATIVE CHARACTERISTICS

HEATER VOLTAGE (A.C. or D.C.)	6.3	Volts
HEATER CURRENT	0.3	Ampere
PLATE VOLTAGE	250 *max.*	Volts
GRID VOLTAGE °	-8	Volts
PLATE CURRENT	8	Milliamperes
PLATE RESISTANCE	10000	Ohms
AMPLIFICATION FACTOR	20	
MUTUAL CONDUCTANCE	2000	Micromhos
GRID-PLATE CAPACITANCE *	1.8	μμf
GRID-CATHODE CAPACITANCE *	4	μμf
PLATE-CATHODE CAPACITANCE *	13	μμf
MAXIMUM OVERALL LENGTH	2-5/8"	
MAXIMUM DIAMETER	1-5/16"	
BASE	Small Octal 6-Pin	

° If a grid-coupling resistor is used, its maximum value should not exceed 1.0 megohm.

* With shell connected to cathode.

INSTALLATION

The *base* pins of the 6C5 fit the six-contact octal-base socket (or the universal eight-contact socket) which may be installed to hold the tube in any position.

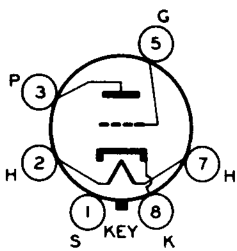
For *heater* operation and *cathode* connection, refer to INSTALLATION for type 6A8.

APPLICATION

As an *amplifier*, the 6C5 is applicable to radio-frequency or audio-frequency circuits. Recommended operating conditions for service using transformer coupling are given under CHARACTERISTICS. For circuits utilizing resistance coupling, typical operating conditions are as follows:

PLATE-SUPPLY VOLTAGE	250	Volts
GRID-BIAS VOLTAGE (Approx.)	-5	Volts
PLATE LOAD RESISTOR	50000 to 100000	Ohms
PLATE CURRENT	1 to 2	Milliamperes
VOLTAGE AMPLIFICATION	14	
VOLTAGE OUTPUT (5% second harmonic)	42	Volts (RMS)

As a detector, the 6C5 may be of the grid-leak and condenser or grid-bias type. The plate voltage for the grid leak and condenser method should be 45 to 100 volts. A grid leak from 0.1 to 1.0 megohm with a grid condenser of 0.00005 to 0.0005 μf is satisfactory. For the grid-bias method of detection, a plate-supply voltage of 250 volts may be used together with a negative grid-bias voltage of approximately 17 volts. The plate current should be adjusted to 0.2 milliampere with no input signal voltage. The grid-bias voltage may be supplied from the voltage drop in a resistor between cathode and ground.



BOTTOM VIEW

